# 6JH8

# Beam-Deflection Tube

**9-PIN MINIATURE TYPE**

**GENERAL DATA**

**Electrical:**

Heater Characteristics and Ratings *(Design-Maximum Values):*

| | | |
|---|---|---|
| Voltage (AC or DC) | 6.3 ± 0.6 | volts |
| Current at heater volts = 6.3 | 0.300 | amp |
| Direct Interelectrode Capacitances:[a] | | |
| Grid No.1 to all other electrodes except both plates | 7.5 | μμf |
| Grid No.1 to deflecting electrode No.1 | 0.04 max. | μμf |
| Grid No.1 to deflecting electrode No.2 | 0.07 max. | μμf |
| Plate No.1 to all other electrodes | 5.0 | μμf |
| Plate No.2 to all other electrodes | 5.0 | μμf |
| Plate No.1 to plate No.2 | 0.4 | μμf |
| Deflecting electrode No.1 to all other electrodes | 4.8 | μμf |
| Deflecting electrode No.2 to all other electrodes | 4.8 | μμf |
| Deflecting electrode No.1 to deflecting electrode No.2 | 0.38 | μμf |

**Characteristics, Class $A_1$ Amplifier:**

*With both plates connected together and with both deflecting electrodes connected to cathode at socket*

| | | |
|---|---|---|
| Plate-No.1 Supply Voltage | 250 | volts |
| Plate-No.2 Supply Voltage | 250 | volts |
| Grid-No.3 Voltage | 250 | volts |
| Cathode Resistor | 220 | ohms |
| Total Plate Current | 14 | ma |
| Grid-No.3 Current | 1.5 | ma |
| Transconductance | 4400 | μmhos |
| Grid-No.1 Voltage (Approx.) for total plate μa = 10 | -13 | volts |

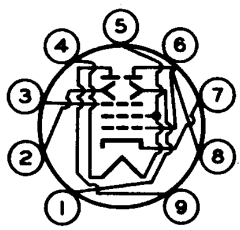
**Mechanical:**

| | |
|---|---|
| Operating Position | Any |
| Type of Cathode | Coated Unipotential |
| Maximum Overall Length | 2-5/8" |
| Maximum Seated Length | 2-3/8" |
| Length, Base Seat to Bulb Top (Excluding tip) | 2" ± 3/32" |
| Diameter | 0.750" to 0.875" |
| Dimensional Outline | See *General Section* |
| Bulb | T6-1/2 |
| Base | Small-Button Noval 9-Pin (JEDEC No.E9-1) |

# 6JH8

Basing Designation for BOTTOM VIEW. . . . . . . . . . . 9DP

Pin 1 - Deflecting Electrode No.2
Pin 2 - Deflecting Electrode No.1
Pin 3 - Grid No.3
Pin 4 - Heater



Pin 5[b] - Heater, Internal Shield, Grid No.2
Pin 6 - Grid No.1
Pin 7 - Cathode
Pin 8 - Plate No.2
Pin 9 - Plate No.1

### COLOR-TV DEMODULATOR

**Maximum Ratings,** ***Design-Maximum Values:***

| | | |
|---|---|---|
| PLATE VOLTAGE (Each plate). . . . | 330 max. | volts |
| PEAK DEFLECTING-ELECTRODE VOLTAGE (Each electrode): | | |
| Negative value. . . . . . . . . | 165 max. | volts |
| Positive value. . . . . . . . . | 165 max. | volts |
| GRID-No.3 (ACCELERATING-GRID) VOLTAGE . . . . . . . . . . . . | 330 max. | volts |
| GRID-No.2 (FOCUSING-GRID) VOLTAGE . . . . . . . . . . . . . | *Connect to cathode at socket* | |
| GRID-No.1 (CONTROL-GRID) VOLTAGE: | | |
| Positive-bias value . . . . . . | 0 max. | volts |
| GRID-No.3 INPUT . . . . . . . . . . | 1 max. | watt |
| CATHODE CURRENT . . . . . . . . . . | 33 max. | ma |
| PLATE DISSIPATION (Each plate). . | 3 max. | watts |

**Typical Operation:**

| | | |
|---|---|---|
| Plate Supply Voltage (Each plate) | 250 | volts |
| Grid-No.3 Voltage . . . . . . . . | 250 | volts |
| Grid No.2 . . . . . . . . . . . . . | *Connected to cathode at socket* | |
| Cathode Resistor. . . . . . . . . | 220 | ohms |
| Maximum Deflecting-Electrode Switching Voltage[c]. . . . . . . | 20 | volts |
| Deflecting-Electrode Voltage for minimum deflecting-electrode switching voltage[c]. . | -14 | volts |
| Voltage Difference Between Deflecting Electrodes for plate-No.1 current and plate-No.2 current to be equal. . . . | 0 | volts |
| Maximum Plate-No.1 Current for deflecting-electrode-No.1 volts = -15, and deflecting-electrode-No.2 volts = +15. . . | 0.7 | ma |
| Maximum Plate-No.2 Current for deflecting-electrode-No.1 volts = +15, and deflecting-electrode-No.2 volts = -15. . . | 0.7 | ma |

| | | |
|---|---|---|
| Maximum Deflecting-Electrode-No.1 Current for deflecting-electrode-No.1 volts = +25, and deflecting-electrode-No.2 volts = −25 . . . . . . . . . . | 0.1 | ma |
| Maximum Deflecting-Electrode-No.2 Current for deflecting-electrode-No.1 volts = −25, and deflecting-electrode-No.2 volts = +25 . . . . . . . . . . | 0.1 | ma |

**Maximum Circuit Values:**

| | | |
|---|---|---|
| Grid-No.1-Circuit Resistance: | | |
| For fixed-bias operation. . . . | 0.1 max. | megohm |
| For cathode-bias operation. . . | 0.25 max. | megohm |

[a] Without external shield.

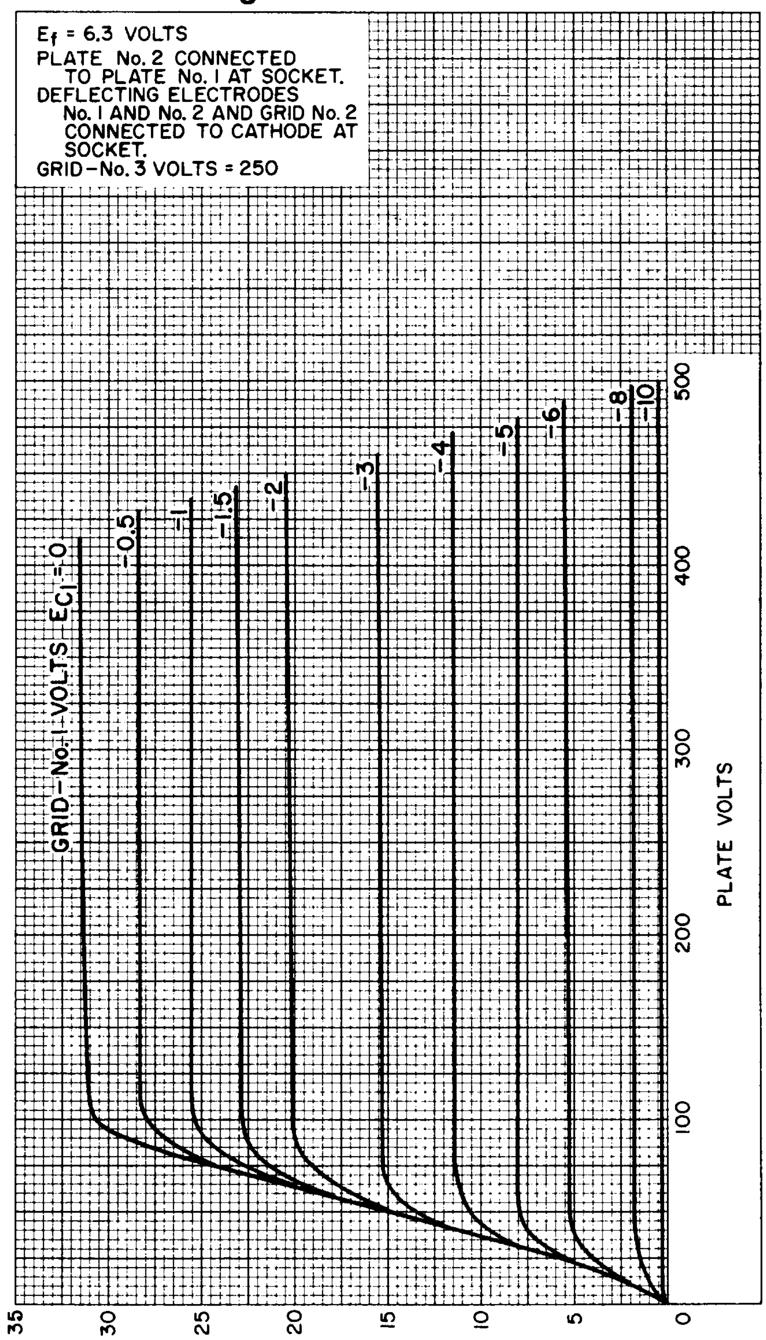
[b] Pin 5 should be connected directly to cathode at socket.

[c] The Deflecting-Electrode Switching Voltage is the total voltage change on either deflecting electrode with an equal and opposite voltage change on the other deflecting electrode required to switch the plate current from one plate to the other plate.

## OPERATING CONSIDERATIONS

This type should be located in equipment so that it is not subjected to stray magnetic fields which may affect the intrinsic operating plate-current balance.

## Average Plate Characteristics

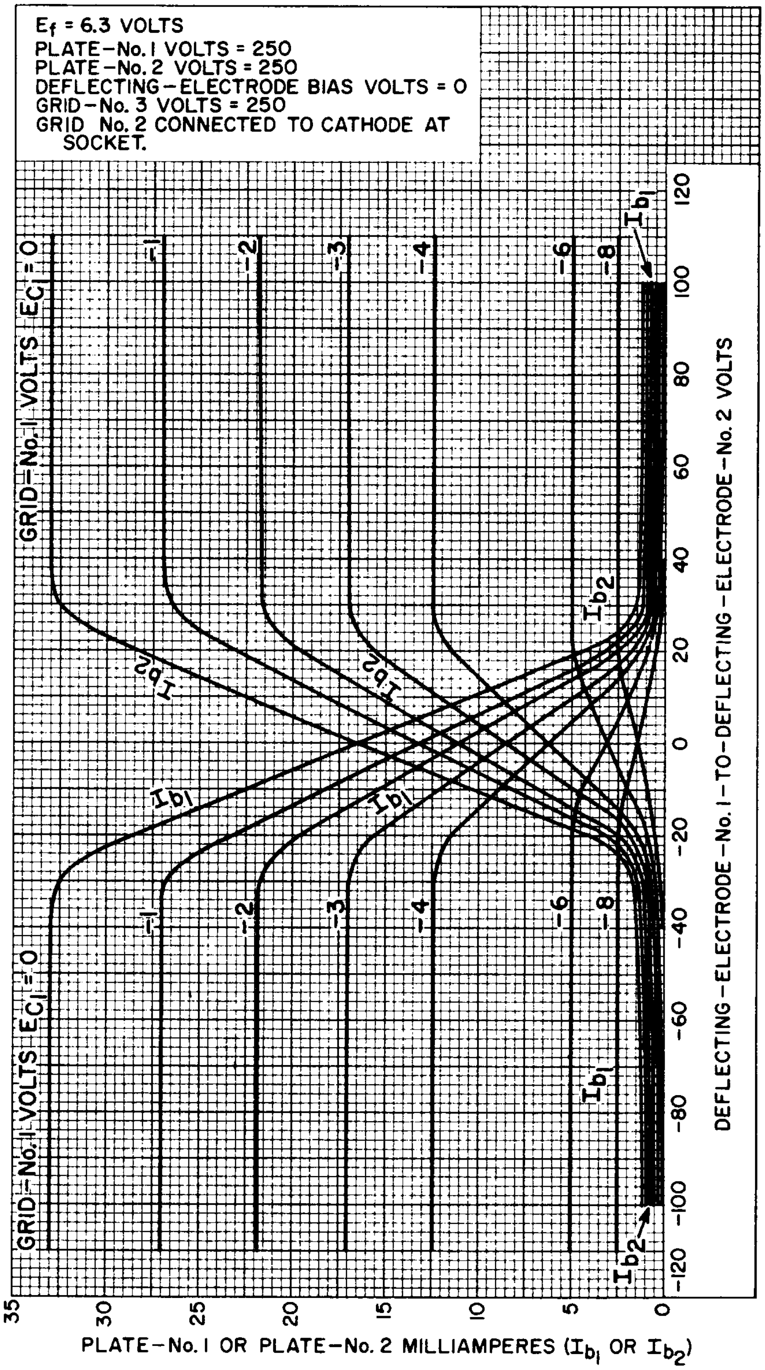



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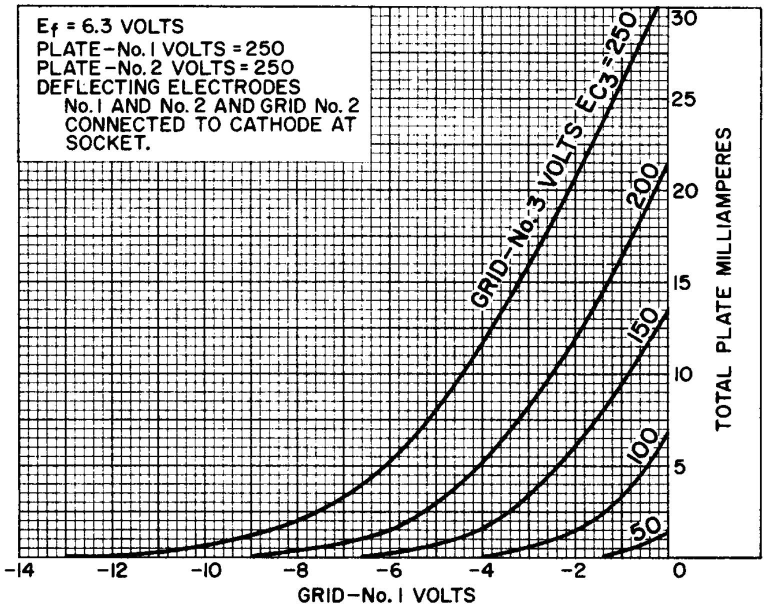
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## Average Characteristics

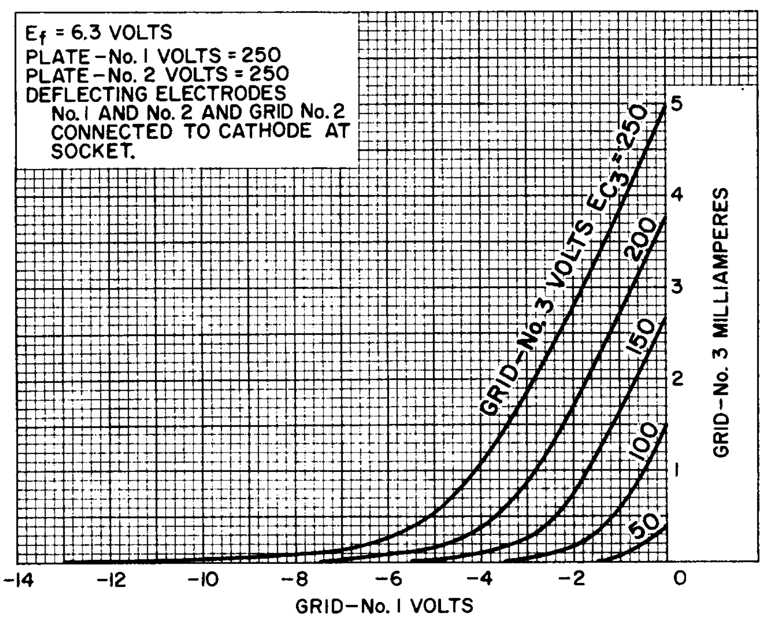



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## Average Characteristics




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92CS-12937



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